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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,307	11/04/2003	Nobutoshi Asai	09792909-5729	5037
26263	7590	10/20/2010		
SNR DENTON US LLP P.O. BOX 061080 CHICAGO, IL 60606-1080			EXAMINER VAN ROY, TOD THOMAS	
			ART UNIT 2828	PAPER NUMBER
			MAIL DATE 10/20/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/701,307	Applicant(s) ASAI ET AL.	
	Examiner TOD T. VAN ROY	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,8,9,11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,8,9,11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/28/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/23/2010 has been entered.

Response to Amendment

The Examiner acknowledges the amending of claims 1, 2, 8 and 9.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 4, 5, 11, and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The independent claims have been amended to state the second electrode acts as a semi-transparent reflection layer and has a refractive index less than 1. Claims 4, 5, 11, and 12 state that a semi-transparent reflection layer with a refractive index less than 1 is found on the electrode. The Examiner notes [0068] of the Applicant's specification which points out that either the second electrode can be of 1 layer with the above characteristics, or be formed of two layers, one of which is the semi-transparent reflection layer. The current claim amendments appear to now be mixing the two exclusive electrode teachings.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 4-5, 8-9, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (US 7102282).

With respect to claim 1, Yamada teaches a light emitting device comprising a driving substrate (fig.19 #11), a resonator structure (fig.19 L) comprising a first electrode (fig.19 #12) on the driving substrate, an electron hole transport layer on the first driving substrate (col.6 lines 37-42), a light emitting layer (fig.19 #13c) on the electron hole transport layer, an electron transport layer on the light emitting layer (col.6 lines 37-42, see Response to Arguments above), a second electrode (fig.19 #14, taught to form cathode, col.53-57) on the electron transport layer; and a color filter disposed over the second electrode (fig.19 #20), wherein the first and second electrode both reflect light (col.6 lines 31-32, 53-54), the second electrode has a refractive index less than 1 and acts as a semi transparent reflection layer (col.6 lines 53-57, since is made of Mg/Ag alloy), the resonator structure resonates light generated in the light emitting layer and is extracted from at least the second electrode side of the electrode, and the materials and thicknesses of the first and second electrodes are selected such that the first and second electrode both reflect outside light at substantially the same strength (col.7-8 lines 49-5 describe the first and second electrode materials (refractive index) and thicknesses are chosen such that the phase portion of the disclosed formula is satisfied; further, col.12 lines 48-64 describes that the cavity formed of #13, as well as the bounding electrodes, is of a composition such that external light is prevented from being reflected, meaning no reflection from either electrode). Yamada further emphasizes the reflectance of the outside light at the resonant wavelength is minimized (col.12 lines 56-64, transmittance very high) in the cavity (includes electrodes). Yamada does not specify the reflectance from the electrodes making up the cavity to be 20% or less. It

would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the electrode reflectance to 20% or less as Yamada makes clear that reflectance of outside light is of great importance to improving device operation (see also figs.20-22 for results of external light reflection reducing steps taken).

With respect to claim 2, Yamada teaches that of claim 1, and the use of the stated formula (abs.).

With respect to claims 4 and 5, Yamada teaches a semi-transparent reflection layer (fig.4 #14) is provided on the second end, and has an extinction coefficient of 0.5 or more and a refractive index of 1 or less (since is made of Mg/Ag alloy).

With respect to claims 8-9, Yamada further teaches multiple display devices (col.2 lines 44-51).

With respect to claims 11 and 12, Yamada teaches a semi-transparent reflection layer (fig.4 #14) is provided on the second end, and has an extinction coefficient of 0.5 or more and a refractive index of 1 or less (since is made of Mg/Ag alloy).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOD T. VAN ROY whose telephone number is (571)272-8447. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tod T Van Roy/
Primary Examiner, Art Unit 2828